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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,201	01/31/2006	Toshihiro Abe	080306.56527US	5492

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EXAMINER

LOPEZ, FRANK D

ART UNIT	PAPER NUMBER
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3745

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/542,201	Applicant(s) ABE ET AL.	
	Examiner F. Daniel Lopez	Art Unit 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-14 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 2 and 4 is/are allowed.
- 6) ☐ Claim(s) 1,3 and 5-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7/14/05</u> . | 6) <input type="checkbox"/> Other: ____. |

Specification

The disclosure is objected to because of the following: throughout the specification, the discussion of the operation of all the figures except fig 4 and 10, are incorrect (see 101 rejection below). Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3, 7 and 9 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a jack-up selector valve (25) which causes a flow line changing valve (26) to close when the directional control valve (22) is in a lowering position (22a) and not when in a raising position (22c), by directing pilot pressure operating the directional control valve to actuate the jack-up selector valve; it is not enabled to do so by directing the pressure from the bottom chamber (11a) to actuate the jack-up selector valve (see 101 rejection below). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

The limitations concerning the 2 variable displacement pumps having their displacement controlled by the pilot pressure controlling the directional control valves causes the above claims to be limited to the embodiments of fig 7 and/or 13. These embodiments are enabled by the specification (see 101 rejection below).

Claims 1, 5, 6, 8 and 10-14 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 line 7 (and throughout the claim “the holding pressure” is confusing, since it appears to be the same as the “feed pressure” of line 8-9. In claim 1 line 12-13

(claim 5 line 3 has similar problems) “said selector valve” should be –said jack-up selector valve–, to agree with lines 8 and 21-22

In claim 6 line 14 “said hydraulic cylinder” is confusing, since it appears to be the same as the “actuator” of line 4 (changing this may affect the “hydraulic cylinder” of claims 13 and 14).

In claim 11 line 6-7 “said bottom chamber” has no antecedent basis.

Claims not mentioned are indefinite, since they depend from one of the above claims.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 3, 7 and 9 are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility. Claim 7 reads only on the embodiment of fig 13 and claims 3 and 9 read only on the embodiment of fig 7 and 13, due to the limitations of controlling the displacement of the pumps, and there being two pumps. Both of these embodiments have a jack-up selector valve (25) which is actuated and connected to the bottom chamber (11a) of the actuator by a pilot line (36), similarly to how the fig 2 embodiment works. The fig 2 embodiment does not work as disclosed, and therefore the figs 7 and 13 embodiments do not work also (the only embodiments which work are those of fig 4 and 10, where the pilot pressure (in 40) actuating one side of the directional control valve (22) is used to actuate the jack-up selector valve).

The specification states, referring to the embodiment of fig 2, the following:

“When the bottom pressure is higher than a predetermined change-over pressure set by a spring 25c...the selected position of the jack-up selector valve 25 is maintained at the selected position 25a, so that the selected position of the flow control valve 26 is also maintained at the selected position 26a” (page 32 line 17-22);

“Therefore, only the regeneration oil is introduced into the rod chamber 11b, the hydraulic boom cylinder 11 contracts under the dead weight of the boom 5, and the boom 5 is caused to turn in a downward direction (undergoes a so-called free fall)” (page 33 line 5-8);

“When the control lever 23a is operated in...a boom-raising direction,...the directional control valve 22 is changed over to a selected position 22c. As a result, the oil pressure discharged from the rod chamber 11b is returned to the reservoir...Accordingly, the bottom pressure becomes lower than the operating pressure for the jack-up selector valve 25 so that the flow control valve 26 is changed over to the selected position 26b” (page 34 line 12-22).

The specification is saying that when the directional valve 22 is moved to the position 22a, where the bottom chamber is connected to tank by 2 throttle valves (29a, 29b) and a load is pushing the piston towards the bottom chamber to pressurize the bottom chamber, the pressure in the bottom chamber will be higher than the force of the spring (25c), but when the directional valve 22 is moved to the position 22c, where the bottom chamber is connected to a pump line (33), rather than to tank, the pressure will be less than this force of the spring. One of ordinary skill in the fluid actuator art would find these statements to be wrong. Any time a chamber is connected to tank, even through a restriction, the pressure will be lower than when the chamber is not connected to tank.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 5 are rejected under 35 U.S.C. § 102(b) as being anticipated by Kamimura. Kamimura discloses a hydraulic working machine comprising a flow line changing valve (16) between a pump (3) and a meter in port of a directional control

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valve (5) controlling flow to a double acting hydraulic cylinder (6); wherein a piloted (by line 2d) jack-up selector valve (14) is changed over when a feed pressure to the cylinder reaches a predetermined pressure (see fig 3), so that the flow line changing valve is closed, preventing flow from the pump to the directional control valve; and when the feed pressure is lower than the predetermined pressure, the jack-up selector valve is changed over (see fig 2), so that the flow line changing valve is open, allowing flow from the pump to the directional control valve.

Conclusion

Claims 2 and 4 are allowed.

Claims 8 and 11 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 6, 10 and 12-14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 112, second paragraph, set forth in this Office action.

Note that this case will not be allowed, until the objection to the specification is dealt with.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Lopez whose telephone number is 571-272-4821. The examiner can normally be reached on Monday-Thursday from 6:00 AM -4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Look, can be reached on 571-272-4820. The fax number for this group is 571-273-8300. Any inquiry of a general nature should be directed to the Help Desk, whose telephone number is 1-800-PTO-9199.

/F. Daniel Lopez/

F. Daniel Lopez
Primary Examiner
Art Unit 3745
March 20, 2008